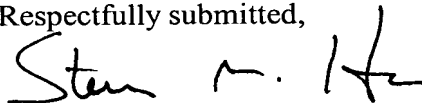


REMARKS

Upon entry of this amendment, claims 18 – 41 are pending. Claims 18, 34 and 38 are the independent claims. Applicants look forward to an examination of these claims at the earliest possible date.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Steven M. Haas". The signature is fluid and cursive, with the first name "Steven" being the most prominent part.

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CLAIMS

1. A distributor device for use in an aluminium casting operation to direct the flow of molten aluminium into a mould, the distributor device including a rigid, substantially bowl-shaped receptacle (2) of a refractory material having a base member (4) and a peripheral wall (6) that extends upwards from the base member, said receptacle having an inlet opening (8) towards the upper end thereof and at least one outlet opening (14) towards the base thereof, the device being constructed and arranged such that, in use, molten aluminium poured into the distributor device through the inlet opening (8) is redirected by the distributor device and flows outwards into the mould through said at least one outlet opening (14); characterised in that the upper surface of the base member (4) is inclined downwards towards the or each outlet opening (14).
2. A distributor device according to claim 1, wherein at least one outlet opening (14) is provided in the peripheral wall (6), the device being constructed and arranged such that in use, molten aluminium flows substantially horizontally outwards through said outlet opening (14).
3. A distributor device according to claim 2, wherein at least one outlet opening (14) is provided in the lower part of the peripheral wall (6), adjacent the base member (4).
4. A distributor device according to any one of the preceding claims, wherein the peripheral wall includes two side wall members (10) and two end wall members (12) and at least one outlet opening (14) is provided in each of said end wall members (12); characterised in that the separation of the side wall members (10) increases towards the ends thereof.
5. A distributor device for use in an aluminium casting operation to direct the flow of molten aluminium into a mould, the distributor device including a rigid, substantially bowl-shaped receptacle (2) of a refractory material having a base member (4) and a peripheral wall (6) that extends upwards from the base member and includes two side wall members (10) and two end wall members (12), said receptacle having an inlet opening (8) towards the upper end thereof and at least

- one outlet opening (14) in each of said end wall members (12) towards the base thereof, the device being constructed and arranged such that, in use, molten aluminium poured into the distributor device through the inlet opening (8) is redirected by the distributor device and flows outwards into the mould through said outlet openings (14); characterised in that the separation of the side wall members (10) increases towards the ends thereof.
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6. A distributor device according to claim 4 or claim 5, wherein the side wall members (10) are curved.
7. A distributor device according to any one of the preceding claims; characterised in that the base member (4) includes a raised flow deflector (16).
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8. A distributor device for use in an aluminium casting operation to direct the flow of molten aluminium into a mould, the distributor device including a rigid, substantially bowl-shaped receptacle (2) of a refractory material having a base member (4) and a peripheral wall (6) that extends upwards from the base member, said receptacle having an inlet opening (8) towards the upper end thereof and at least one outlet opening (14) towards the base thereof, the device being constructed and arranged such that, in use, molten aluminium poured into the distributor device through the inlet opening (8) is redirected by the distributor device and flows outwards into the mould through said at least one outlet opening (14); characterised in that the base member (4) includes a raised flow deflector (16).
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9. A distributor device according to any one of the preceding claims; characterised by a porous element (38) including a substantially bowl-shaped mesh of woven material that fits into and is supported by said receptacle (2), the device being constructed and arranged such that, in use, molten aluminium poured into the distributor device flows through said porous element.
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10. A distributor device for use in an aluminium casting operation to direct the flow of molten aluminium into a mould, the distributor device including a rigid, substantially bowl-shaped receptacle (2) of a refractory material having a base member (4) and a peripheral wall (6) that extends upwards from the base member,
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said receptacle having an inlet opening (8) towards the upper end thereof and at least one outlet opening (14) towards the base thereof, and a porous element (38), the distributor device being constructed and arranged such that, in use, molten aluminium poured into the distributor device through the inlet opening (8) is redirected by the distributor device and flows through said porous element and outwards into the mould through said at least one outlet opening (14); characterised in that the porous element (38) includes a substantially bowl-shaped mesh of woven material that fits into and is supported by said receptacle (2).

11. A distributor device according to claim 9 or claim 10, in which the porous element (38) includes a mesh of coated glass fibres.
12. A distributor device according to any one of claims 9 to 11, in which the porous element (38) includes a support frame (45) that, in use, engages and is supported by the receptacle (2).
13. A distributor device according to any one of the preceding claims, wherein the peripheral wall (6) is inclined outwards.
14. A distributor device according to any one of the preceding claims, including a heating element for pre-heating the device.
15. A distributor device according to any one of the preceding claims, including a support structure (24,26).
16. An aluminium casting installation including a mould (20), a delivery device (28,30) for delivering molten aluminium into the mould and a distributor device (2) according to any one of the preceding claims, the distributor device (2) being mounted below the delivery device (28,30) and above the mould (20), the installation being constructed and arranged such that, in use, molten aluminium is poured from the delivery device into the mould through the distributor device.
17. An aluminium casting installation according to claim 16, wherein the distributor device (2) is positioned so that, during pouring, it is partially immersed in the liquid metal in the mould (20) with said at least one outlet opening (14) below the surface (22) of the liquid metal.